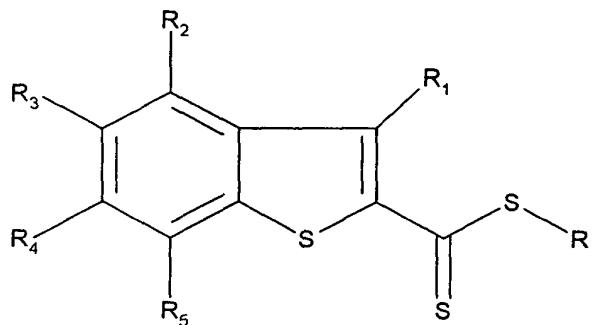


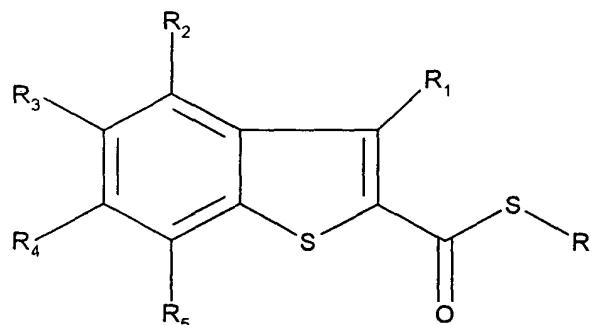
CLAIMS

What is claimed is:

1. 1. A method for the preparation of benzo[b]thiophenecarbodithioic esters of the
2. formula:



10 wherein R is alkyl, R₁ is hydrogen, halogen, or alkyl, R₂, R₃, R₄, and R₅ are independently
11 selected from the group consisting of hydrogen, halogen, alkyl, alkoxy, alkylthio,
12 trifluoromethyl, cyano, and aryl,
13 wherein said method comprises reacting an equivalent of an S-thiol ester of the formula:



20 with one-third of an equivalent of P₂S₅, 2 equivalents of at least one alkali metal carbonate,
21 about 2.5 mole percent of a phase transfer catalyst, and a catalytic amount of water in hot

22 toluene.

1 2. The method of claim1 wherein R is methyl or ethyl and R₁ R₂, R₃, R₄, and R₅ are
2 independently selected from the group consisting of hydrogen, chlorine, C₁-C₄ alkyl, and
3 trifluoromethyl.

1 3. The method of claim2 wherein R₁ R₂, R₃, R₄, and R₅ are hydrogen.

1 4. The method of claim 3 wherein R is ethyl.

1 5. The method of claim 1 wherein the alkali metal carbonate is potassium carbonate or
2 cesium carbonate.

1 6. The method of claim5 wherein the alkali metal carbonate is potassium carbonate.

1 7. The method of claim 1 wherein the phase transfer catalyst is benzyltriethylammonium
2 chloride or tetrabutylammonium bromide.

1 8. The method of claim7 wherein the phase transfer catalyst is benzyltriethylammonium
2 chloride.

1 9. The method of claim 7 wherein the phase transfer catalyst is tetrabutylammonium
2 bromide.

1 10. The method of claim 1 wherein R is ethyl, R₁, R₂, R₃, R₄, and R₅ are hydrogen, the
2 alkali metal carbonate is potassium carbonate, and the phase transfer catalyst is
3 benzyltriethylammonium chloride.